Uni-FORMS

UNIVERSAL FORM CLAMP CO.

CHICAGO, ILLINOIS

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THE UNI-FORM SYSTEM
of
WALL FORM CONSTRUCTION

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UNI-FORMS

With Renewable Faces

For All Types of Concrete Construction

THE UNI-FORM SYSTEM OF WALL FORM CONSTRUCTION

providing

A system of panel forms which, when assembled with the Uni-Form Tie, comprises a structural form.

A System which requires lining and bracing on one side only.

A System which basically employs one size of panel, virtually substituting a constant for a usual variable.

Fractional and adjustable forms for fillers and pilasters.

A unit form that has no top or bottom, right or left, and members and locks either horizontally or vertically.

A unit form with a steel frame that is indestructible and a plywood face that can easily be replaced.

Metal frames that provide the well-known advantages of mechanical attachment of steel forms.

Plywood faces that provide nailing surfaces for the installation of key ways, boxes, inserts, etc.

Protection for the plywood edges and corners by a galvanized moulding formed in the shape of an angle.

Ties that are positive spreaders, eliminating wooden spreaders, lock the Uni-Forms, break back from the wall face and leave a small hole to be grouted.

Tight forms and smooth faces that assure concrete surfaces of even texture.

Scaffold brackets that are attached to the forms, thus eliminating staging.

Simplified assembly with a minimum of fastening devices.

Standardized equipment assuring lower material and labor costs as well as better work and better co-ordinated job.

CATALOG NO. 604

Manufactured and Sold by

UNIVERSAL FORM CLAMP COMPANY

General Offices and Factory: 972 Montana Street, Chicago, Illinois

BRANCH OFFICES:

101 Park Avenue
New York, N. Y.

Rhodes Building
Atlanta, Georgia

2314 Preston Avenue
Houston, Texas

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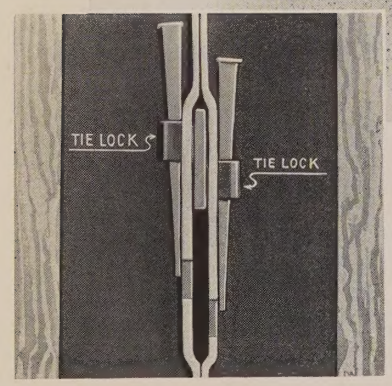
The Uni-Form System of Wall Form Construction

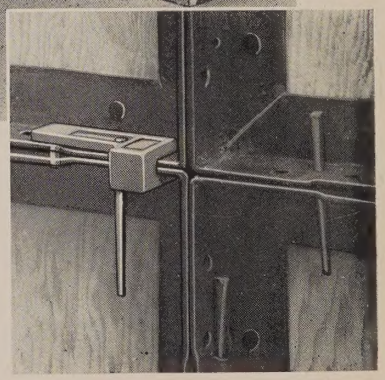
ASSEMBLY



Uni-Forms locked by the Uni-Form Tie and cut nails.

The Uni-Form System of Wall Form Construction provides plywood faced steel frames which are locked together by a pre-formed tie that is a positive spreader.

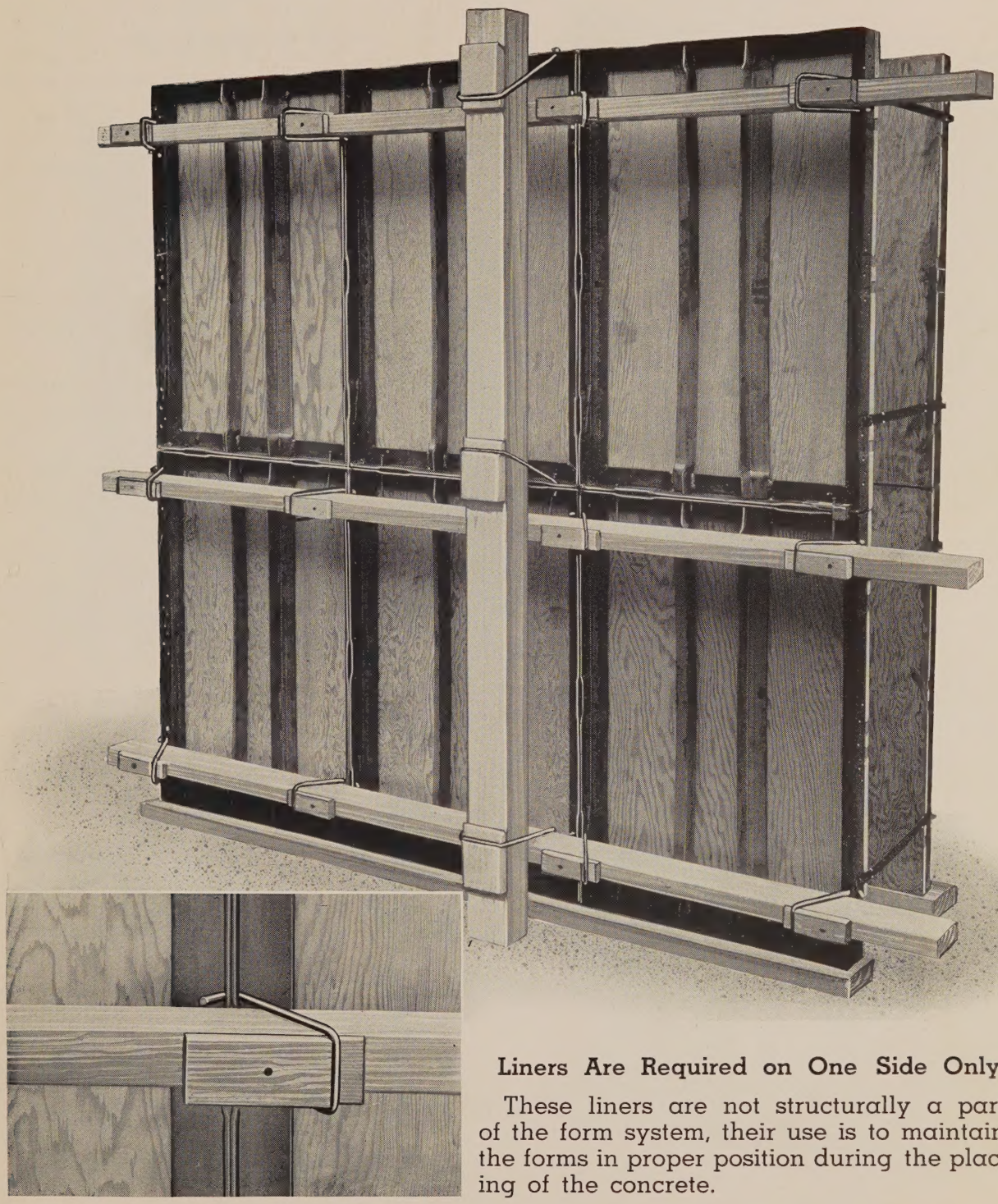
The Uni-Forms, assembled with the Uni-Form Tie, comprise a complete structural form ready to receive concrete. Lining and bracing is required on one side only as shown on the next page.



Panel Loc Clamps assure tight horizontal joints.

The Uni-Form System of Wall Form Construction

ALIGNMENT



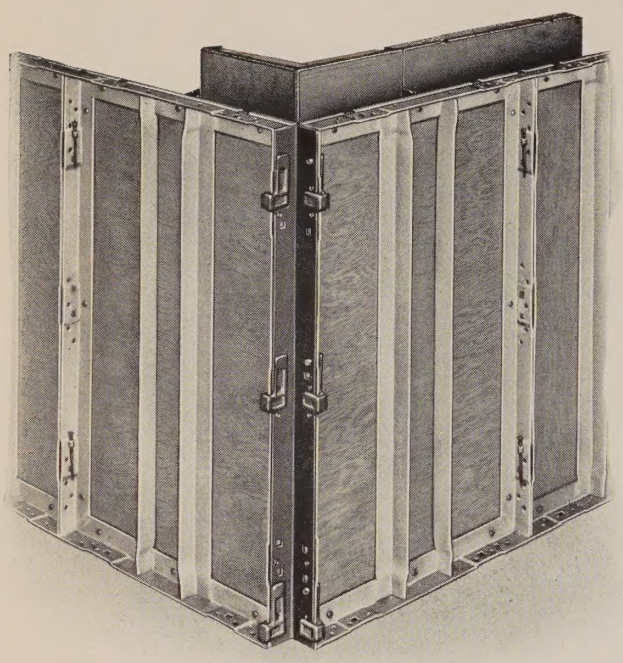
The Liner Clamp and Block

Liners Are Required on One Side Only

These liners are not structurally a part of the form system, their use is to maintain the forms in proper position during the placing of the concrete.

The Uni-Form System of Wall Form Construction

CORNERS



The Outside Corner

The Outside Form

Corner Angles and Panel Loc Clamps are assembled to provide the outside corners.

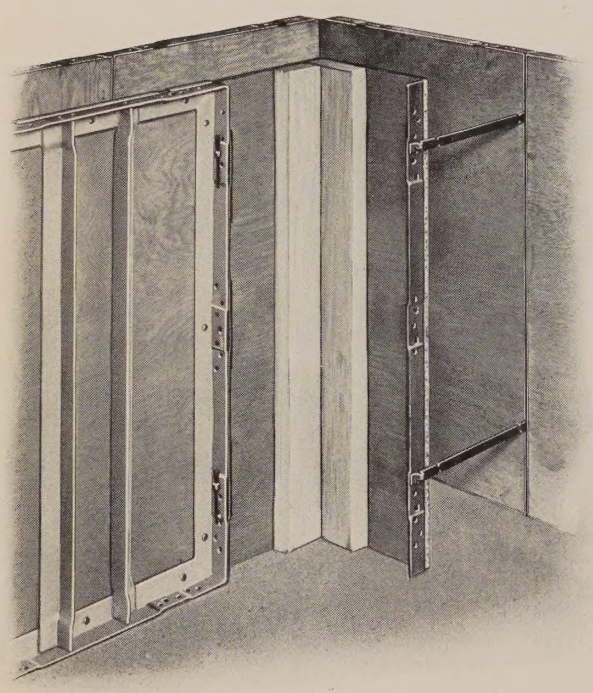
Panel Loc Clamps securely lock the angles to the frames and prevent any possibility of spreading during the placing of concrete.

The Inside Form

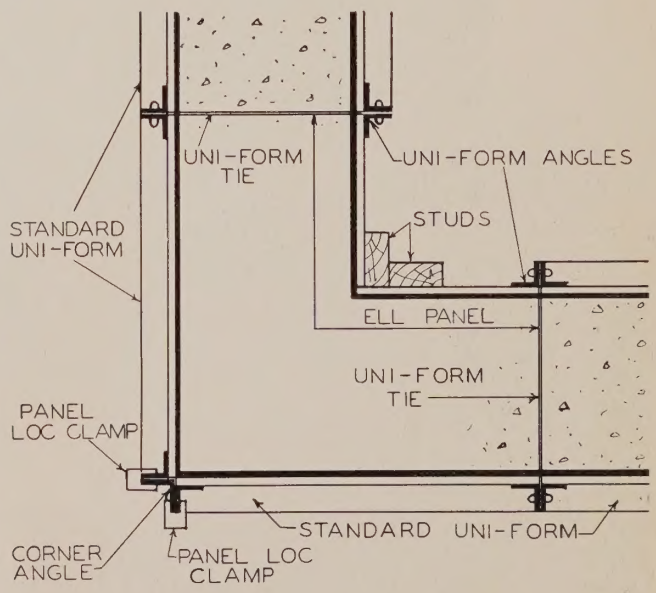
Uni-Form Angles with vertical studs and plywood facing are assembled to provide the inside corner.

Inside corners, fabricated on the job, can be re-used, then dismantled and the angles recovered for future use.

When wall thicknesses are constant and a large number of reuses can be obtained, shop frabricated inside corners may be used.



The Inside Corner



DETAIL OF STANDARD CORNER

(ALIGNMENT NOT SHOWN)

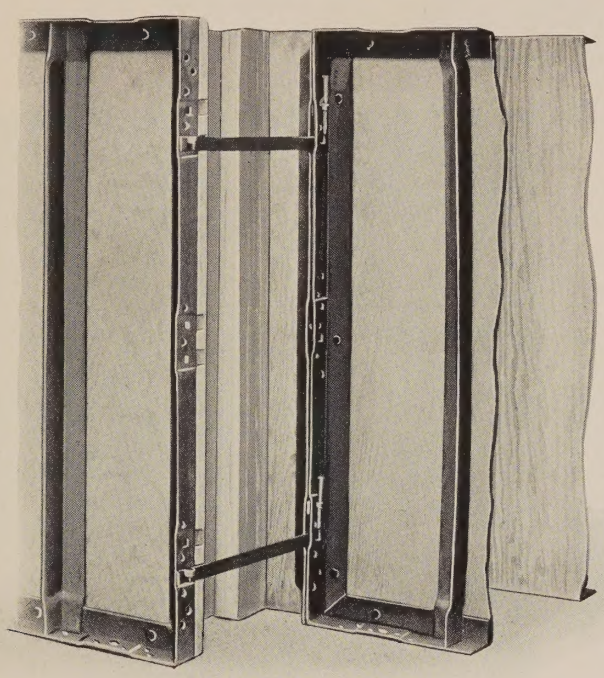
The Uni-Form System of Wall Form Construction

PILASTERS

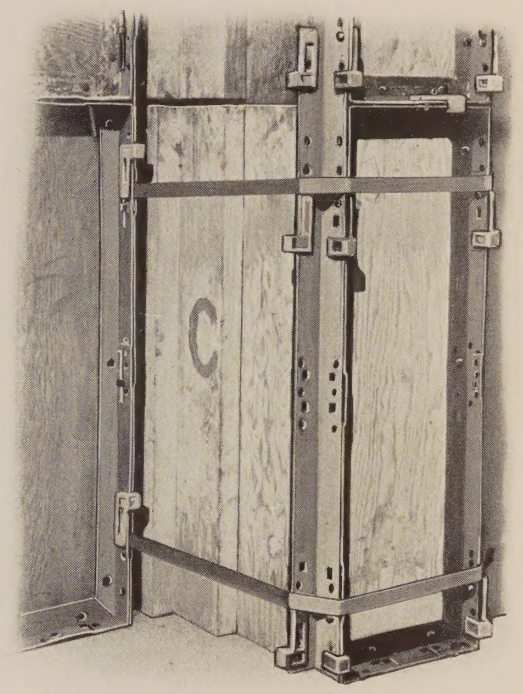
Two methods are employed in forming pilasters. One is with the bench fabricated forms as shown in Method "A". The other is with the shop fabricated forms as shown in Method "B".

Both methods center the forms on the center line of the columns thereby avoiding interference with the reinforcing steel.

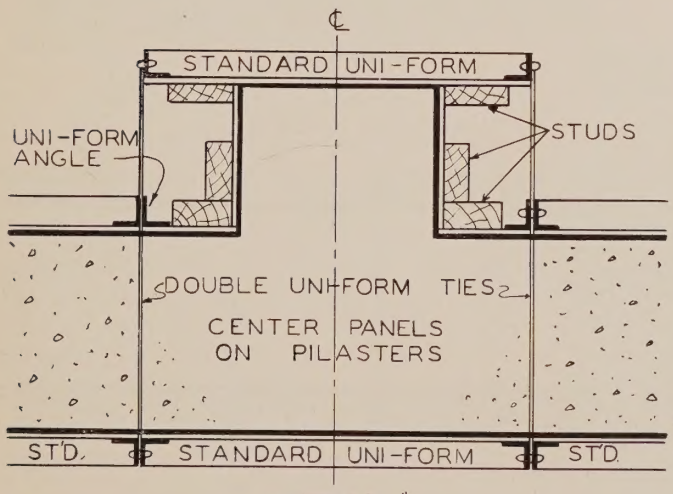
The forms are erected on the unbroken side of the wall, the steel placed and then the pilaster side closed in.



METHOD "A"



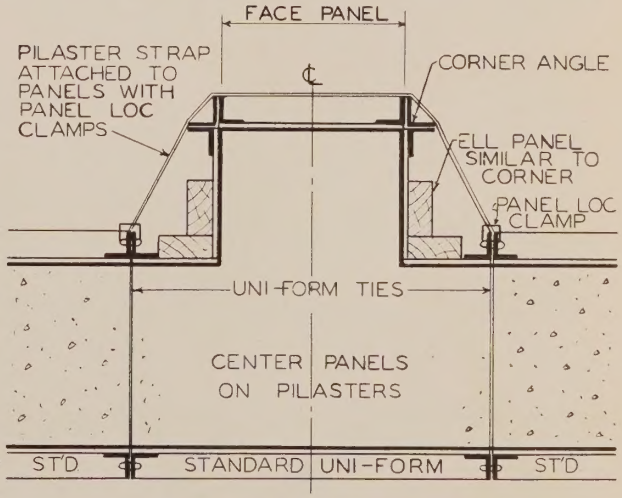
METHOD "B"



METHOD "A"

BENCH FABRICATED PILASTER

(ALIGNMENT NOT SHOWN)



METHOD "B" ALTERNATE

BENCH FABRICATED PILASTER

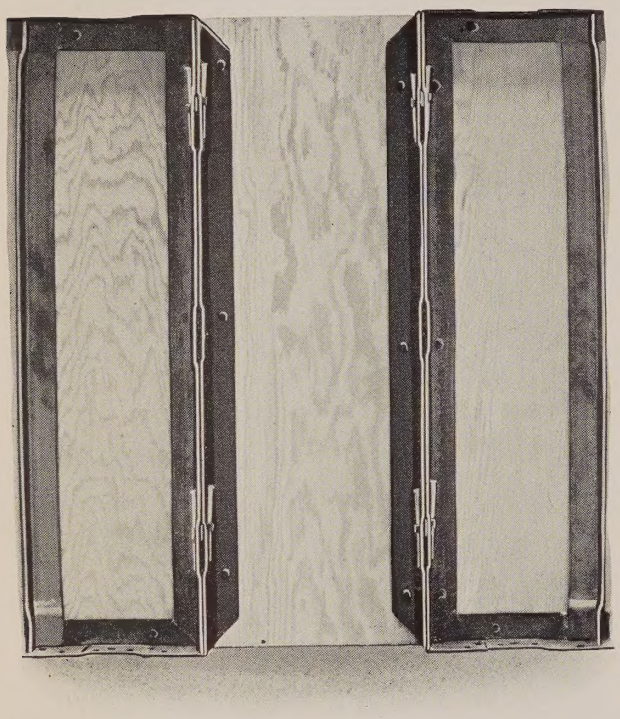
(ALIGNMENT NOT SHOWN)

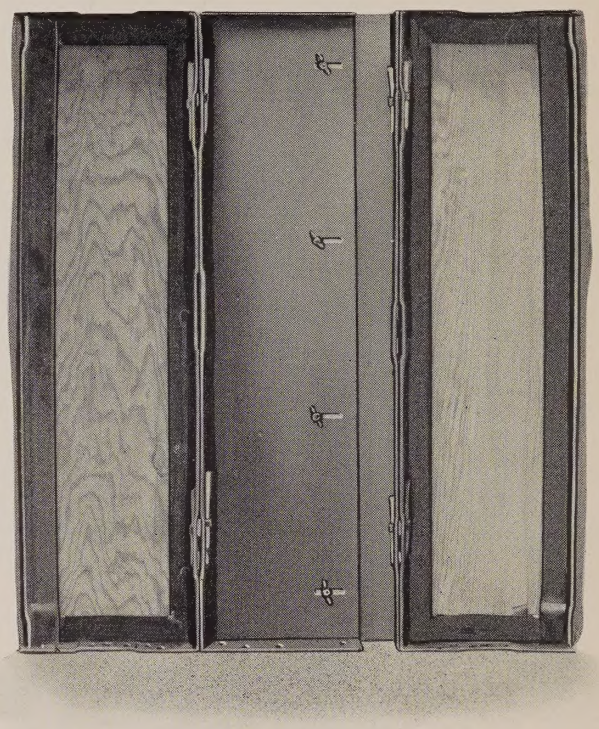
The Uni-Form System of Wall Form Construction

FILLERS

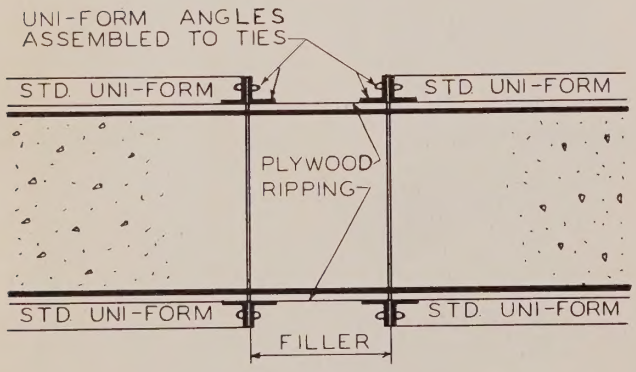
Fillers are required in any reach of forms between corners and pilasters. With the Uni-Form System this filler is never greater than one foot. This opening is closed with either a bench fabricated filler, as shown in Method "A", or a shop fabricated adjustable filler as shown in Method "B".

Both methods permit rapid closing of fillers. The necessity of returning to patch forms is eliminated. Smoother operation of the forms is assured. Form costs are reduced.





METHOD "A"

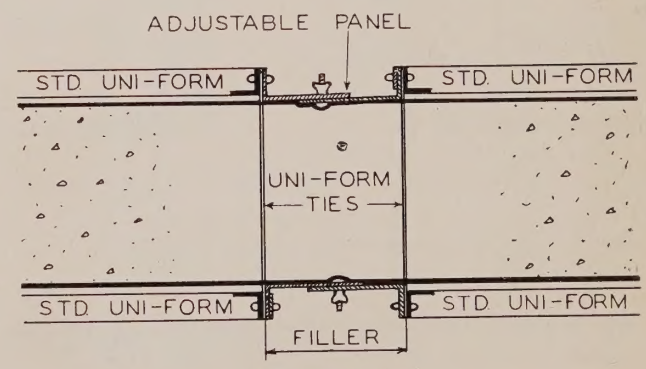


METHOD "A"

ADJUSTABLE FILLER

(ALIGNMENT NOT SHOWN)

METHOD "B"

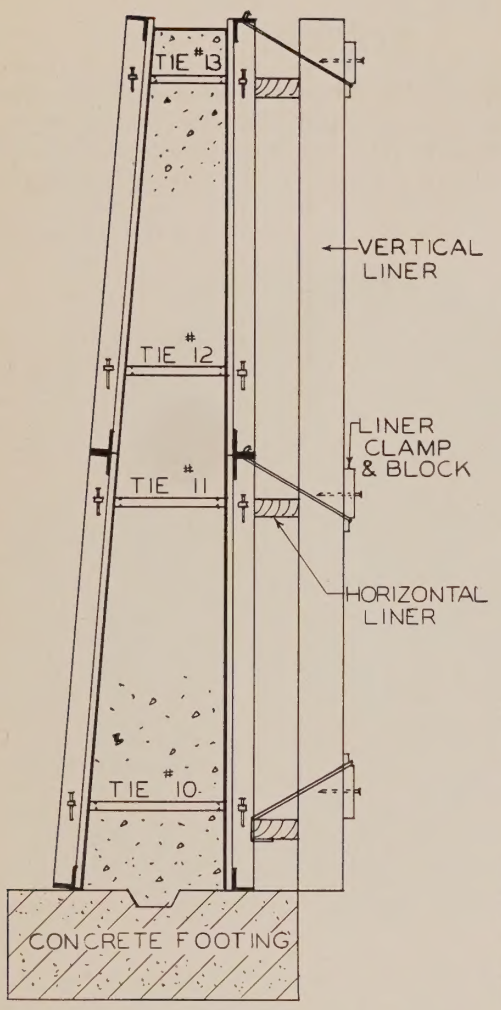


METHOD "B"

ADJUSTABLE FILLER

(ALIGNMENT NOT SHOWN)

The Uni-Form System of Wall Form Construction

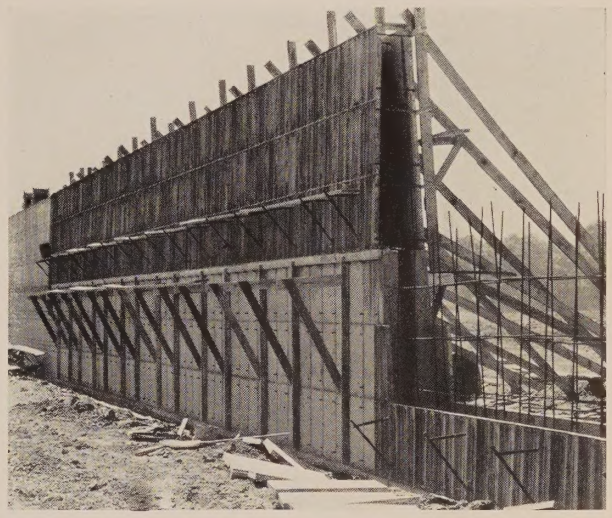


BATTERED WALL

BATTERED WALLS

Battered walls not exceeding 1" in 12" are readily formed by using Uni-Form Ties fabricated to the proper lengths.

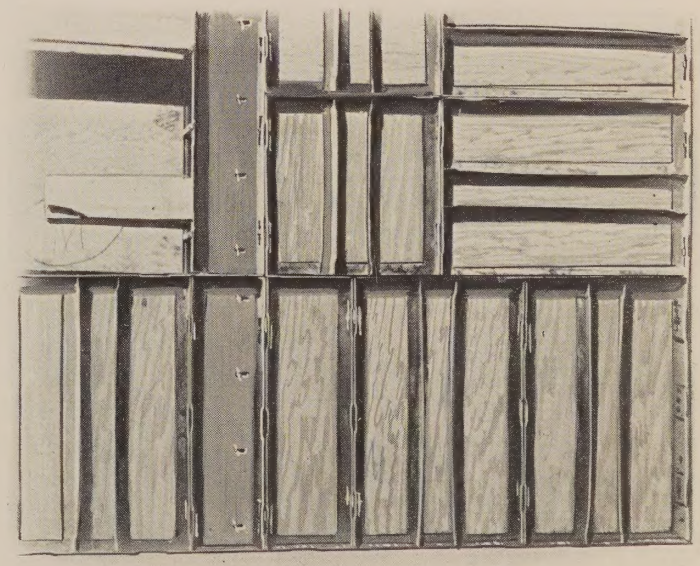
The ties are made to accurate length and are plainly stamped to show the correct position in the form.



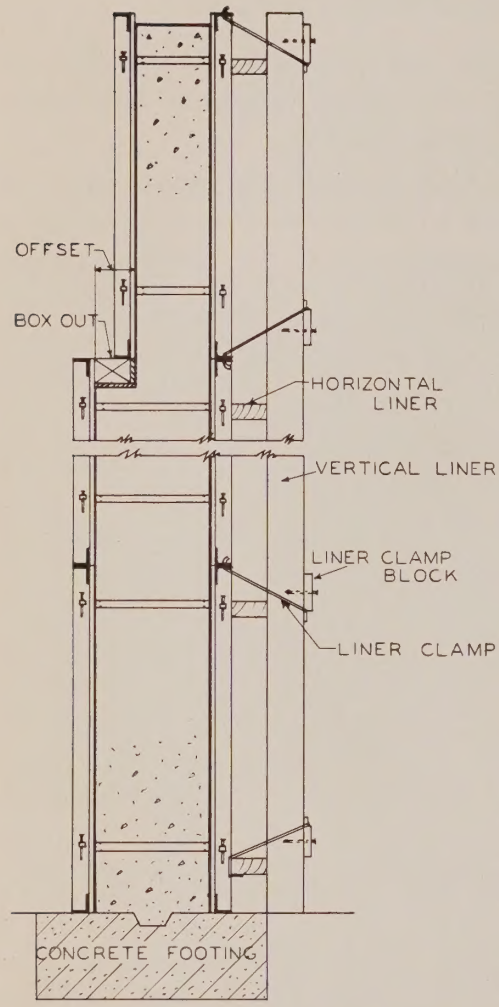
FRACTIONAL FORMS

Greater convenience is afforded in following breaks in footings or in forming special conditions, by fractional size Uni-Forms. Three sizes are available, 1' x 3', 1' x 2' and 2' x 2'. No other sizes are necessary.

Only a small quantity of fractional sizes are necessary to follow the most difficult type of forming.



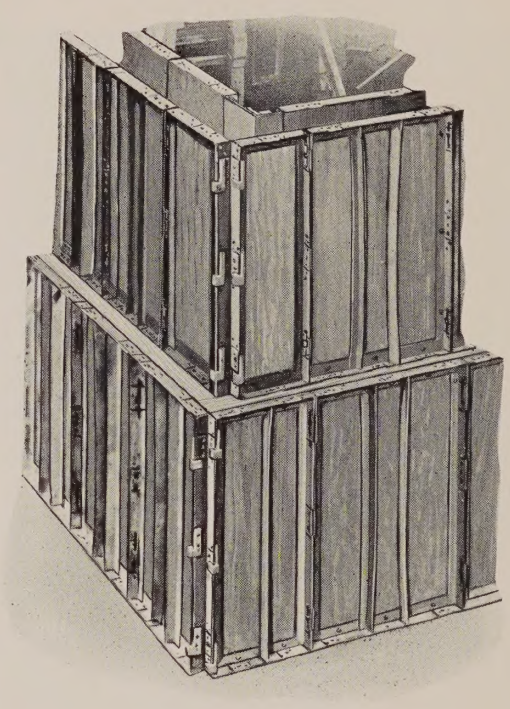
The Uni-Form System of Wall Form Construction



OFFSET WALL

OFFSETS

Uni-Forms are erected to the nearest foot above the offset. The Forms are then boxed in below this level to the correct elevation of the offset. The Uni-Forms above the offset are set back to the proper wall line and erected to the height required.



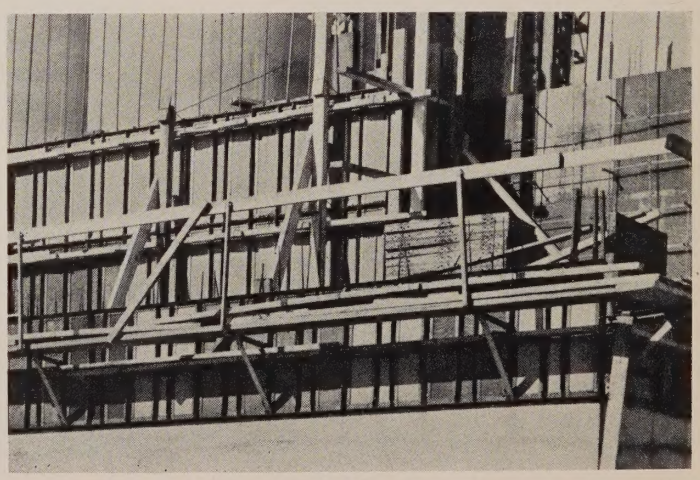
SCAFFOLDS

The Uni-Form System provides scaffold brackets that are attached to the Uni-Form frame eliminating the need for wooden staging, thereby considerably reducing the cost of scaffolding.

The brackets are furnished with guard rail supports if required.

The Scaffold Brackets are installed at six foot levels.

Forms are erected, aligned and stripped from this scaffolding.



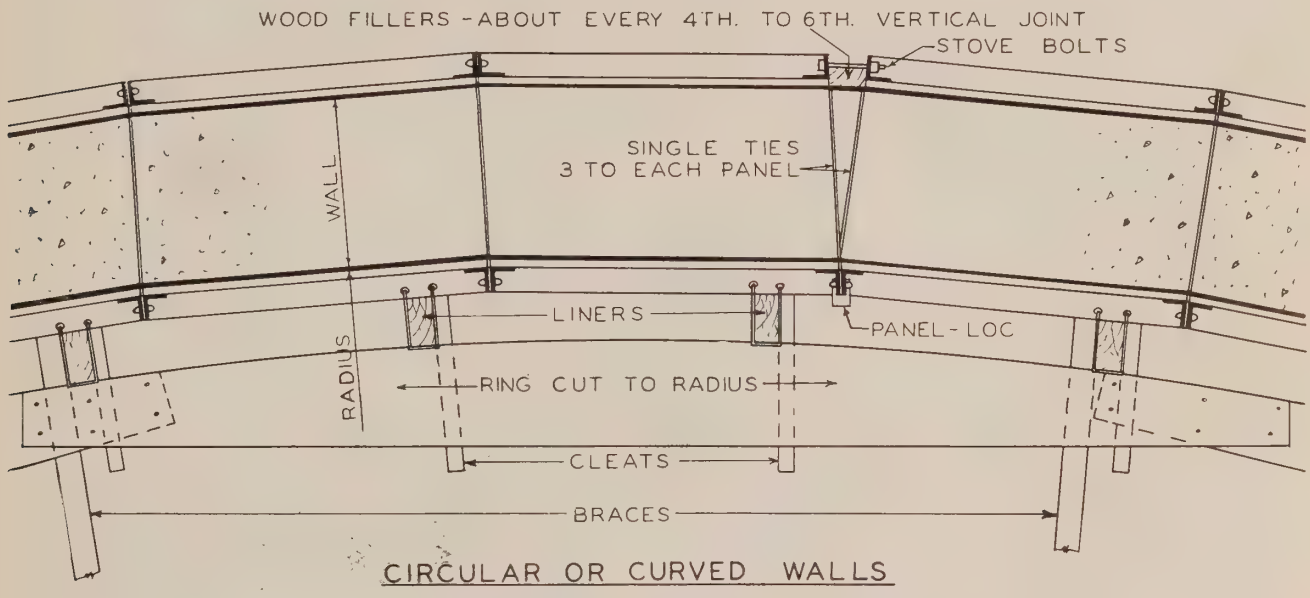
The Uni-Form System of Wall Form Construction

CIRCULAR OR CURVED WALLS

Uni-Forms when erected for circular or curved walls follow the curvature of the wall line. The inside form is erected. Vertical alignment and horizontal templates are attached and brought to correct position.

The additional length of wall form on the outside of the curve is taken up by placing fillers, as required, to prevent lag of the outer form. Complete details are shown in the drawing below.

The short length of the Uni-Forms follows the correct curvature with a minimum of deviation. Actually the forms are erected in a series of short chords.

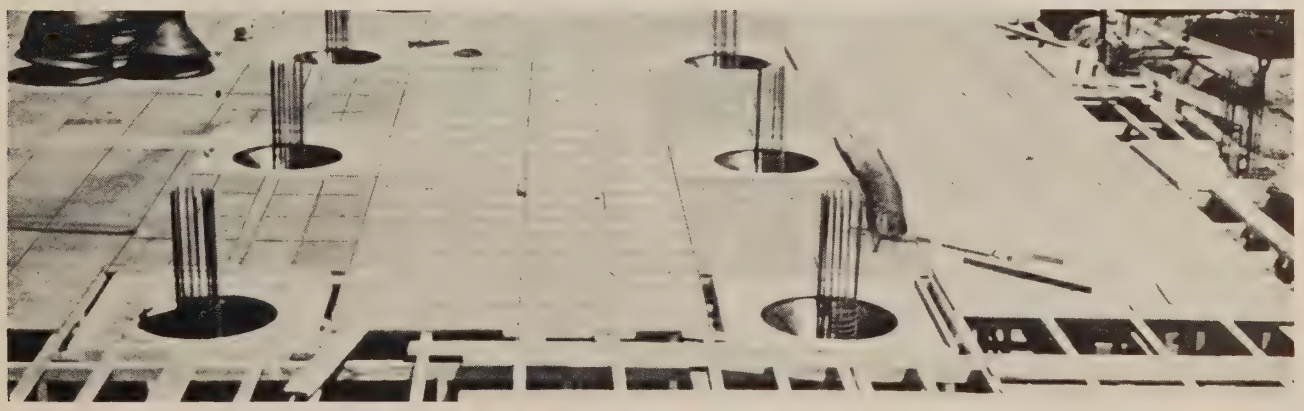


CIRCULAR OR CURVED WALLS

FLAT SLABS

A supplementary use of Uni-Forms is in flat slab construction. Centering is provided at 3'0" intervals and the forms laid. No nailing or fastening is required.

After the deck is laid, fillers are placed at drop heads or along beams as required to complete the forms as shown in the photograph below.

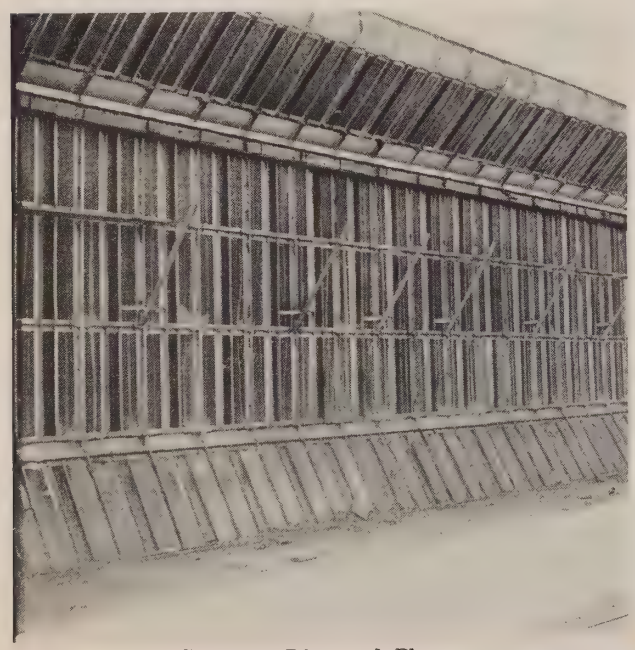


The Uni-Form System of Wall Form Construction

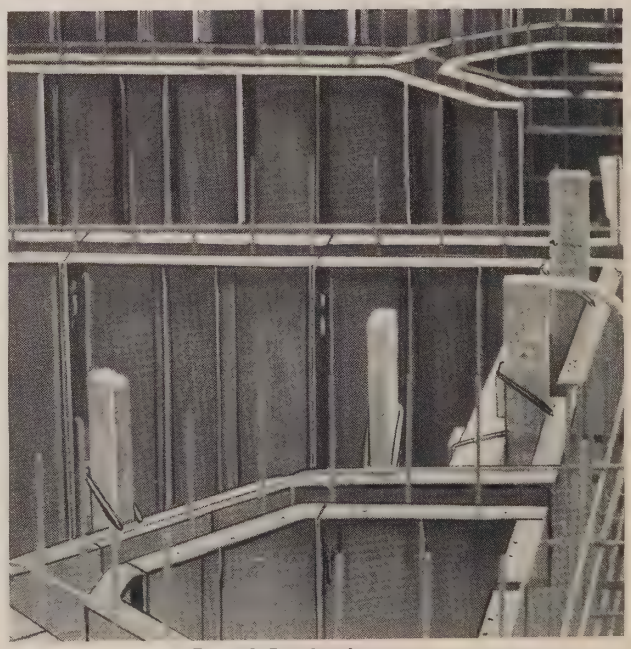
SPECIAL FORMS

The Uni-Form System of wall form construction can be co-ordinated and adapted to forming where enough reuses will warrant the cost of special forms to provide a complete form system to meet special job conditions.

Bridge Piers



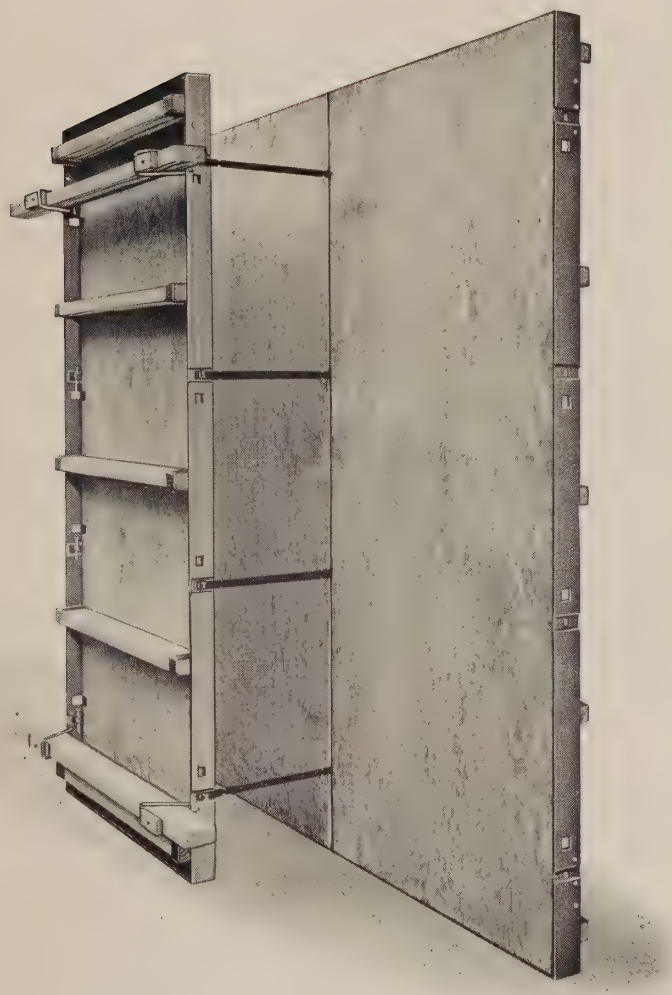
Sewage Disposal Plant



Penal Institutions

The Uni-Form System of Wall Form Construction

THE FOUNDATION UNIT



Requires no walers.

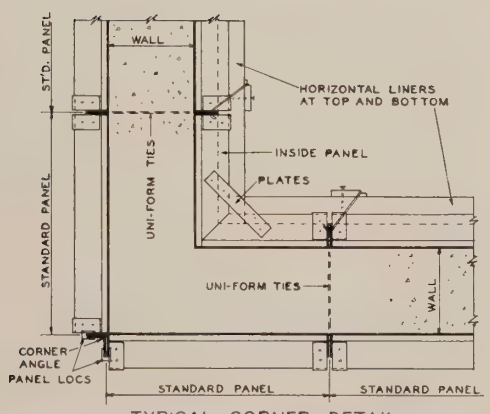
Has all of the advantages of the standard Uni-Form.

Light in weight — one man can handle it.

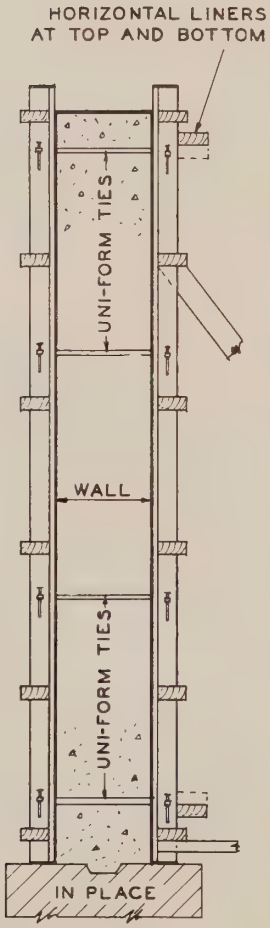
Working load — 500 pounds per square foot.

Standard sizes 3'0" x 7'0" and 3'0" x 8'0".

Other sizes can also be furnished.



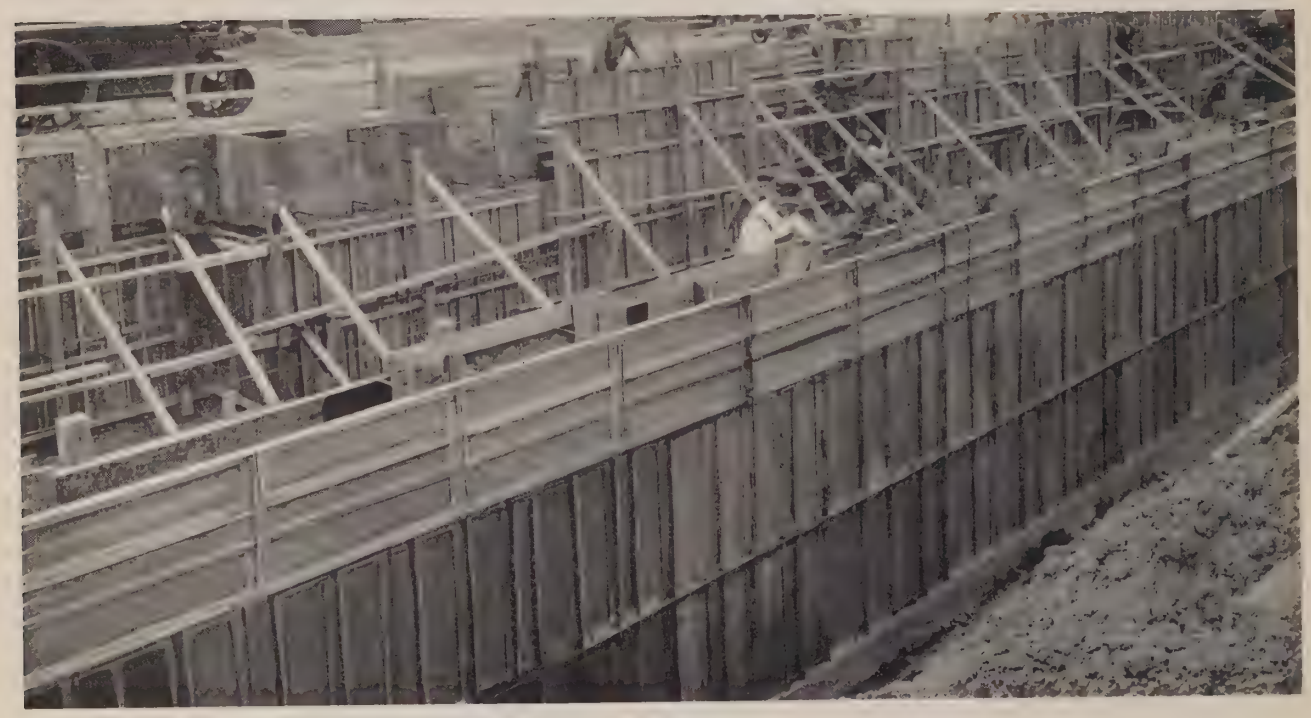
TYPICAL CORNER DETAIL



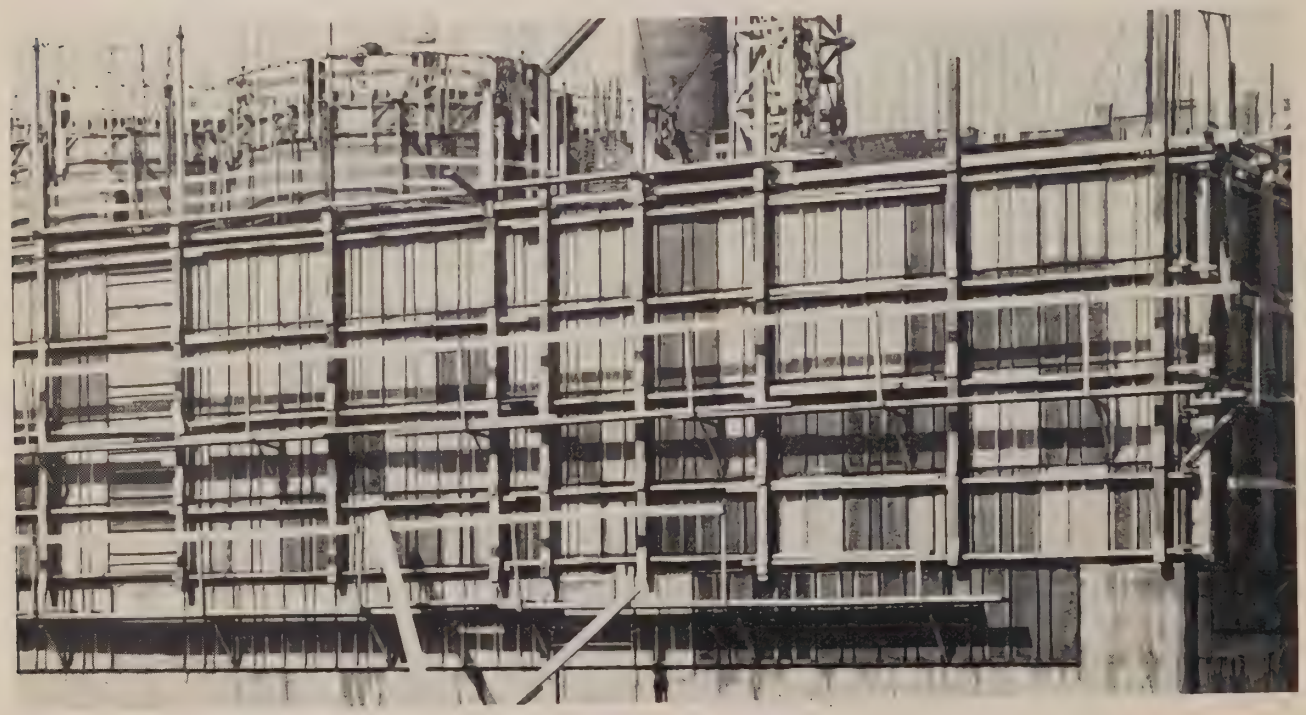
SECTION
BASEMENT WALL

The Uni-Form System of Wall Form Construction

JOB PHOTOGRAPHS



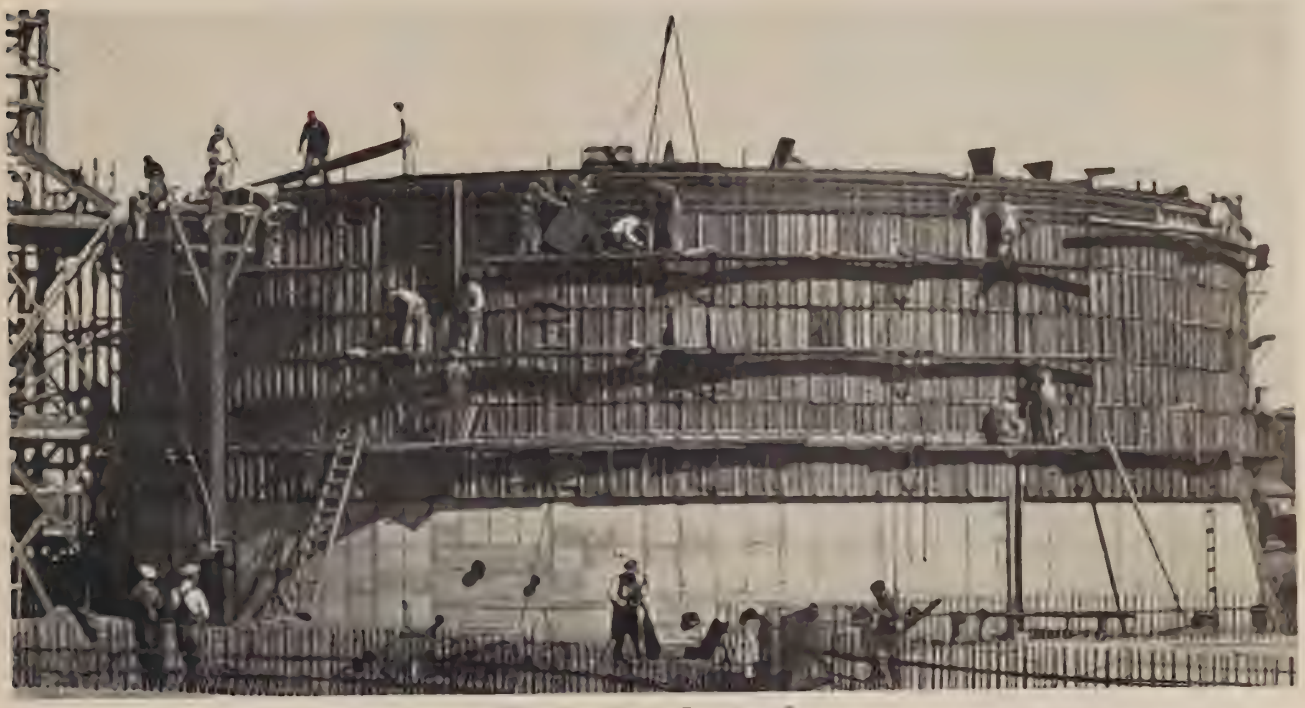
Foundations for Federal Housing Project



Walls for a Grain Elevator

The Uni-Form System of Wall Form Construction

JOB PHOTOGRAPHS



Circular Tank Construction

Typical Wall Construction

THE UNI-FORMS

Pat. No. 1,970,547

The Uni-Forms have a maximum working load of 1,000 pounds per square foot and consist of steel frames with plywood facing attached.

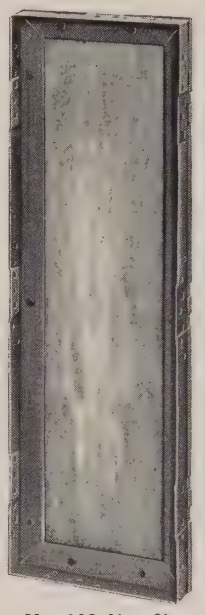
The steel frame is made of 1¾" x 1¾" special high carbon steel angles and is fabricated by arc welding.

The plywood is of five ply construction, ½" thick, sound two sides, with edges sealed and guaranteed by the manufacturer against ply separation.

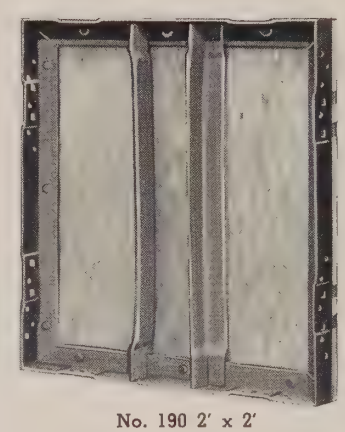
Protecting angles, consisting of galvanized steel mouldings formed in the shape of an angle, provide protection for the plywood edges and corners.

The plywood and the protecting angles are attached to the frame with split rivets making it easy to remove, turn or replace when necessary. The head of the split rivet is beveled for easy removal.

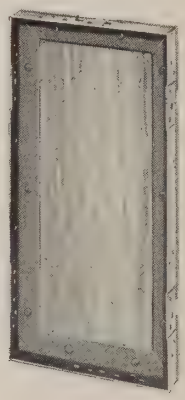
No. 100 2′ x 3′



No. 180 1′ x 3′



No. 190 2′ x 2′



No. 170 1′ x 2′

ADJUSTABLE PANELS

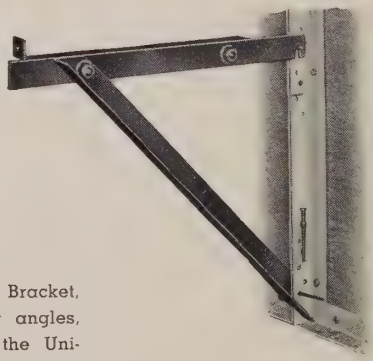
Metal Panels — 3′0″ High

The Adjustable Panel is made of heavy sheet metal in two sections that are held together with bolts and wing nuts inserted in the slotted holes which permit the adjustment.

The sides of the sections are punched to member with the Uni-Form frame.

Catalogue Number	Adjustment
151	3½" to 5½"
152	5½" to 8½"
153	8½" to 12"
154	12" to 15½"

THE SCAFFOLD BRACKET



The Scaffold Bracket, made of heavy angles, is attached to the Uni-Form providing a safe working scaffold at a very low cost. It is furnished with or without a guard rail support.

No. 16 Scaffold Bracket without guard rail support. Weight 9 pounds.

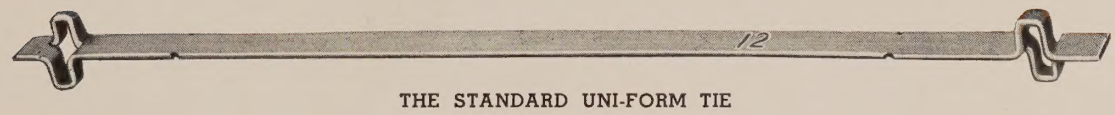
No. 17 Scaffold Bracket with guard rail support. Weight 14 pounds.

SPECIFY CATALOGUE NUMBERS OF PRODUCTS WHEN ORDERING

THE UNI-FORM TIE

Pat. No. 1,970,547

A COMBINATION TIE, LOCK, DOWEL AND SPREADER



THE STANDARD UNI-FORM TIE

The Uni-Form Tie has a recommended safe working load of 3,000 pounds and combines four functions in one operation of erection. It ties both sides of the forms. It locks the forms one to the other. It provides a fresh and clean dowel, easily located, for receiving and membering the adjoining forms. It acts as a spreader for keeping the forms in position before and during forming and assures correct wall widths.

The Uni-Form Tie is fabricated from special high carbon steel with notches placed to break off the tie ½" inside the wall. A break-off at ¾" will be furnished upon request.

It is not necessary to cut the ties in order to strip the forms. After the forms are stripped the ties are broken off inside the wall face with the break-back tool shown on the next page.

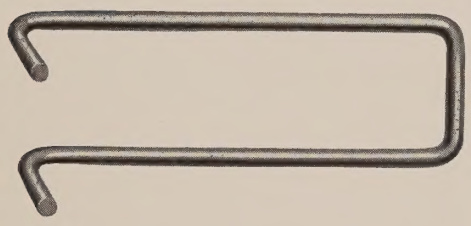
Uni-Form Ties are stamped to indicate the width of the finished wall. Error or the necessity of measuring is eliminated.

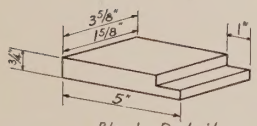
The Standard Uni-Form Tie is used for all types of construction. The single tie is used chiefly in circular wall construction at the fillers required in the outside perimeter.

When ordering Uni-Form Ties it is only necessary to specify the wall thickness.

THE SINGLE UNI-FORM TIE

THE LINER CLAMP



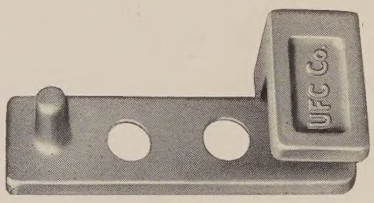


—Block Detail—

The Liner Clamp, manufactured of spring steel, is shaped to hook into holes provided for that purpose in the Uni-Form. Alternate liner clamps are driven into position in opposite directions so that lateral movement of the liner is impossible. The liner clamps are held in position by wooden blocks so driven that the frames are drawn tightly against the liners. A six penny nail driven into the block holds it in place.

No. 24 — For 2 x 4s — Weight 22 lbs. per 100
No. 44 — For 4 x 4s — Weight 25 lbs. per 100
No. 26 — For 2 x 6s — Weight 28 lbs. per 100
No. 46 — For 4 x 6s — Weight 30 lbs. per 100
No. 48 — For 4 x 8s — (4 x 4s over 2 x 4s) Weight 36 lbs. per 100
No. 42 — For 4 x 12s — (4 x 6s over 2 x 6s) Weight 47 lbs. per 100

THE PANEL LOC CLAMP



The Panel Loc Clamp, a malleable casting, is an external clamp used to lock corners and horizontal joints. The clamp pin acts as a dowel holding the faces of the panels flush, while the U section prevents separation at the joints.

Panel Loc Clamps, spaced approximately ten feet on center, assure tight horizontal joints. They are especially recommended for use on battered walls.

Catalogue Number

No. 50 Panel Loc Clamp. Weight 50 lbs. per 100.

THE NAIL

The Nail used with the Uni-Form Ties is a special 20 D Cut Nail. Full tightening of the forms is assured by the extra taper of the nail.

Catalogue Number

No. 20-D Cut Nail. Weight 100 lbs. per keg.

SPECIFY CATALOGUE NUMBERS OF PRODUCTS WHEN ORDERING

THE ERECTION TOOL

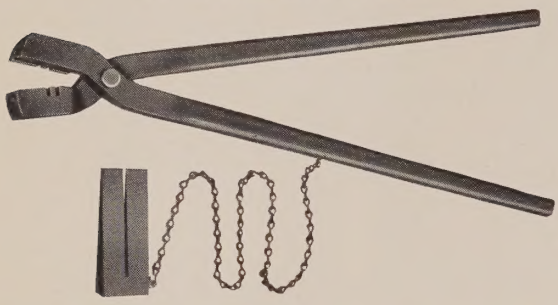
The erection tool, made of drop forged steel, is used in erecting and stripping Uni-Forms.

The slot in the tool permits drawing the forms up tight in erection, permitting easy insertion of the cut nails.

The erection tool is also used for removing the nails and dismantling the forms when stripping.

No. 60 Erection Tool — Weight 3 pounds.

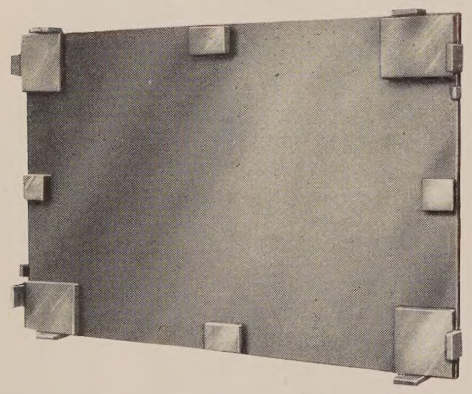
THE BREAK-BACK TOOL



The Break-back Tool, made of chrome nickel steel, is used to break off the Uni-Form Ties.

No. 36 Break-Back Tool — Weight 9 pounds.

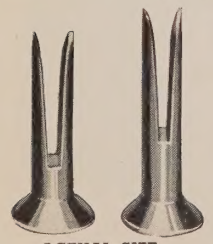
THE RIVETING JIG



The Riveting Jig is used to properly assemble the plywood facing to the Uni-Form Frame.

No. 199—Riveting Jig — Weight 85 pounds.

THE SPLIT RIVETS



ACTUAL SIZE

The Split Rivets are used for holding the plywood to the Uni-Form Frame. The heads of the rivets are tapered providing for their easy removal.

No. 166 Split Rivet, 1⅛" long, is used when putting on new plywood.
Weight — 15 pounds per 1000.

No. 162 Split Rivet, 1¼" long, is used when reconditioning Uni-Forms and when plywood faces are turned.
Weight — 20 pounds per 1000.

THE CORNER ANGLE

For Outside Corners

The Corner Angle is made of 2¼" x 2¼" angle punched to member with the Uni-Form.

No. 76—2′ long — Weight 4 pounds.
No. 85—3′ long — Weight 6 pounds.
No. 73—6′ long — Weight 15 pounds.
No. 74—9′ long — Weight 23 pounds.

THE UNI-FORM ANGLE

For Inside Corners and Fillers

The Uni-Form Angle is identical in size and fabrication to the standard Uni-Form frame and members correctly with the Uni-Forms.

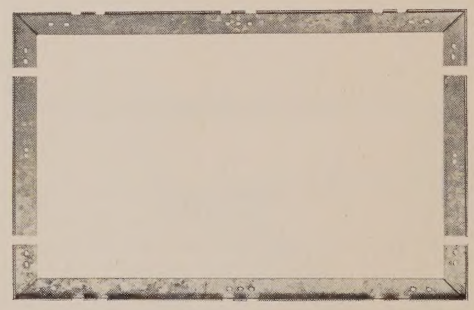
No. 76—2′ Uni-Form Angle — Weight 3½ pounds.
No. 86—3′ Uni-Form Angle — Weight 5 pounds.

THE TAPER PIN

The Taper Pin, made of high grade steel, is used for bringing the forms into line at the horizontal joints so that the cut nails and panel loc clamps can be easily applied at the horizontal joints.

No. 15—Taper Pin — Weight 1 pound.

THE PROTECTING ANGLES



The Protecting Angles are galvanized steel mouldings formed in the shape of an angle and provide protection for the plywood edges and corners.

No. 70 for 2′ x 3′ Uni-Form Wt. 3 lbs. set.
No. 79 for 2′ x 2′ Uni-Form Wt. 3 lbs. set.
No. 78 for 1′ x 3′ Uni-Form Wt. 3 lbs. set.
No. 77 for 1′ x 2′ Uni-Form Wt. 2 lbs. set.

THE PLYWOOD

The Plywood is of five ply construction, ½" thick, sound two sides, with edges sealed and guaranteed by the manufacturer against ply separation.

No. 67—23⅞" x 35⅞" — For 2′ x 3′ Uni-Form.
No. 63—23⅞" x 23⅞" — For 2′ x 2′ Uni-Form.
No. 57—11⅞" x 35⅞" — For 1′ x 3′ Uni-Form.
No. 53—11⅞" x 23⅞" — For 1′ x 2′ Uni-Form.

SPECIFY CATALOGUE NUMBERS OF PRODUCTS WHEN ORDERING

UNIVERSAL PRODUCTS

for concrete construction

FORM CLAMPING AND TYING DEVICES

Spirolocs
Assembly for Cone Nuts
Twistyes
Form Clamps
Tightening Wrenches
Rod Pullers
Cone Nuts
Hex Nuts
Band Clamps
Band Iron
Riser Rods
Paper Tubing

BUILDING SPECIALTIES

Dovetail Anchor Slot
felt filled — standard
Anchors
brick-stone-furring
Reed Soffit Clips
expansible-rigid
Adjustable Inserts
Continuous Sleeper Spacing Anchor
Soffit Spacers
Wire Beam Saddles
Beam Clamps

ACCESSORIES FOR REINFORCED CONCRETE

Combination Slab Bolster
and High Chair
Slab Bolsters and Spacers
Beam Bolsters and Spacers
Bar Chairs
Continuous Stirrup Assembly
High Chairs
Joist Chairs
Bar Ties
Tie Chairs

ROAD ACCESSORIES

Continuous Spacer and Support
for dowel bar assemblies
Individual Dowel Chair